AMENDMENTS TO CLAIMS

- Please cancel claims 1 – 11 and 22.
- Please amend pending claims 12, 14, and 16 - 21 as indicated below. A complete listing of all claims and their status in the application are as follows:

1 - 11 (canceled)

12. (currently amended) An Integrated Circuit package structure, comprising:

an Integrated Circuit device, having a top surface and a bottom surface, electrical contact points to said ~~IC~~ Integrated Circuit device are mounted in the bottom surface of said ~~IC~~ Integrated Circuit device;

a heatsink for said Integrated Circuit device having a flat bottom surface extending past the Integrated Circuit device by a first distance, the flat bottom surface contacting the top surface of said Integrated Circuit device;

a substrate ~~on which to mount said Integrated Circuit device,~~ having a flat upper surface and a lower surface, the flat upper surface extending past the Integrated Circuit device by the first distance and having points of electrical contact to said ~~IC~~ Integrated Circuit ~~device~~device, ~~having been provided in said upper surface,~~ the lower surface having points of electrical contact for further interconnect of said ~~IC package~~ substrate to surrounding circuitry or components, the upper and lower surfaces extending beyond the bottom surface of said Integrated Circuit device; and ~~having been provided in said lower surface;~~

~~a cavity for inserting said Integrated Circuit device, said cavity to be a closed cavity that encloses said IC device, said cavity being provided with an opening through which a molding compound can be entered into said cavity; and~~

a molding compound ~~for insertion into said cavity~~ between the flat bottom surface of the heatsink and the flat upper surface of the substrate to fill only the first distance, said molding compound among the points of electrical contact to said Integrated Circuit device.

13. (original) The Integrated Circuit package structure of claim 12 wherein said Integrated Circuit device is selected from a group comprising Ball Grid Array (BGA),

Land Grid Array (LGA) and Pin Grid Array (PGA), Chip Scale Packaging (CSP) and Quad Flat Pack (QFP) devices.

14. (currently amended) The Integrated Circuit package structure of claim 12 ~~wherein~~ wherein:

the flat bottom surface of said heat sink extends past said Integrated Circuit device by a second distance, the second distance is less than the first distance and is perpendicular to the first distance; and

said molding compound extends past the second distance of said heatsink and is coplanar with the top surface of said heatsink, ~~said substrate is a means for connecting contact points of said IC device with surrounding electrical circuitry.~~the flat bottom surface of the heat sink extends past said Integrated Circuit device by a second distance, the second distance less than the first distance; and

said molding compound extends only to the second distance of the heatsink.

15. (original) The Integrated Circuit package structure of claim 12 wherein said substrate comprises;

an upper surface;

electrical contact points in said upper surface, forming substrate upper surface contact points, provided to make electrical contact with contact points of said IC devices;

a lower surface;

electrical contact points in said lower surface, forming substrate lower surface contact points, provided to make electrical contact with surrounding electrical circuitry of which said IC device is a functional component; and

a network of interconnect lines that interconnects said substrate upper surface contact points with said substrate lower surface contact points, said network to be contained in one or more planes within said substrate.

16. (currently amended) The Integrated Circuit package structure of claim 12 ~~wherein said cavity comprises said heatsink, said substrate and~~further comprising four planer spacers that separate said heatsink from said substrate by a measurable amount, said amount

to be selected such that contact points of said IC device make contact with said substrate upper surface contact points while a top surface of said IC device makes contact with said heatsink, ~~said heatsink and said substrate forming opposite walls of said cavity while~~ said four spacers form two sets of two opposite walls ~~of~~ around said ~~cavity~~ Integrated Circuit device whereby two walls that make up each of these two sets of opposite walls are parallel and have identical geometric dimensions, the bottom surface of said heatsink being parallel with the upper surface of said substrate.

17. (currently amended) The Integrated Circuit package structure of claim 12 ~~wherein said cavity is a cavity of a size such that one or more~~further comprising a plurality of Integrated Circuit devices ~~can simultaneously be fitted inside said cavity thereby creating a molding that contains one or more IC devices~~spaced a third distance apart, the third distance greater than two of the first distances.

18. (currently amended) The Integrated Circuit package structure of claim 17 wherein ~~a~~ said molding ~~that comprises more than one IC device is separated into one or more moldings that contain one or more IC devices~~compound bonds said heatsink and said substrate.

19. (currently amended) The Integrated Circuit package structure of claim 12 ~~with the addition of a means for positioning said inserted Integrated Circuit device with said cavity into which it has been inserted into a mold injection station under control of automatic transport of said IC device.~~wherein:

the flat bottom surface of the heat sink extends past said Integrated Circuit device by a second distance, the second distance less than the first distance; and

said molding compound fills only the second distance between said heatsink and said substrate.

20. (currently amended) The Integrated Circuit package structure claim 12 ~~with the addition of a means for exposing said IC device to UV light thereby curing~~wherein said molding compound is a material cured by UV light.

21. (currently amended) The Integrated Circuit package structure of claim 12 whereby said heatsink is replaced by a ~~surface~~ structure of geometric dimensions that are

equal to the dimensions of said substrate but whereby said ~~surface~~ structure does not have heat dissipating characteristics of a typical heatsink.

22. (canceled)